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Coronavirus Disease 2019 (COVID-19)



Markets: Operational considerations for COVID-19 mitigation measures in low resource settings

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Document purpose: Markets are a critical place of commerce and a source of many essential goods, but they can pose potential risks for COVID-19 transmission. This document provides suggestions for mitigating COVID-19 transmission in markets in low-resource settings and describes considerations associated with each mitigation measure. The proposals are presented in table format and are organized by mitigation principle (**physical distancing, hand hygiene, cleaning and disinfection, and respiratory hygiene**).

Document audience: This document is intended for use by any person, institution, or organization preparing for or responding to community transmission of COVID-19, and for those assisting those organizations (federal and local governments, CDC country offices, and others).

Layered approach: Mitigation measures in markets can be organized into three categories: personal controls, administrative controls, and engineering controls. These should be layered on top of each other to reduce overall risk of COVID-19 transmission for customers and vendors in markets.

- **Personal controls:** Individual behaviors to protect themselves and those around them
- **Administrative controls:** Processes and policies that keep people safe
- **Engineering controls:** Physical structures put in place to distance people from hazards

Note on implementation: Below we provide suggestions for how to reduce COVID-19 transmission in markets. Community members must be engaged in the planning and implementation process for any mitigation measure to succeed. The ideas below can be adapted to fit the local context by engaging local populations in the planning and decision-making process. To do so, governments can identify trusted stakeholders and actors, such as community leaders, to provide feedback on proposed mitigation measures before their implementation. These representatives will not only know the local needs and conditions, but they may know of lessons learned from previous public health interventions in the community.

More information on how to effectively engage communities: [Tips for Engaging Communities during COVID-19 in Low-Resource Settings, Remotely and In-Person](#)  [31 pages] 

Physical Distancing

Personal controls: General recommendations for physical distancing in markets

Maintain at least a **2-meter distance from others** and practice no-contact greetings. Customers can also try to stay home as much as possible by combining trips to the market.

Administrative and engineering controls:

Possibilities for markets¹

- ✓ Space stalls a few (2+) meters apart, use every other stall, and/or extend the market area when possible so that customers and vendors stay as far apart from each other as possible.
- ✓ Consider limiting to one vendor per stall.
- ✓ Food vendors make items take-away only (not for eating on-site).
- ✓ Make aisles and entrances/exits go in one direction only (see picture below).
- ✓ Set up markers for where customers should stand at stalls (2+ meters from the vendor and from other customers) and where to stand in queues (see picture below).
- ✓ Extend operating times to help space out crowding.
- ✓ Consider separate days or times (such as when the market opens, before others arrive) for people who are elderly or who have serious underlying medical conditions.
- ✓ Encourage households to send a designated family member, rather than multiple family members, to buy food and supplies. The designated family member would ideally not be elderly or have serious underlying medical conditions.
- ✓ Encourage use of digital payment tools when feasible, such as mobile money.
- ✓ Control the flow of people in and out of the market by closing off some entry and exit points.
- ✓ Consider decreasing the number of customers allowed in the market at the same time. This can be done by assigning people with certain last names to certain days or times of day or setting a limit on the number of people allowed inside at once.
- ✓ Consider advising only vendors to handle food and other goods, not customers.

Materials, activities, and personnel needed for implementation

- Communication campaigns (via radio, newspaper, social media, WhatsApp, or other platforms) so that customers understand new procedures.
- Signs and/or audio messages within the market explaining procedures and rationale to customers and vendors.
- Paint, chalk, or other tools for marking where to stand and walk.
- Market staff to explain and remind customers of physical distancing rules and to help control the number of people in the market.
- Support from local authorities.

Considerations and challenges for implementation

Because these engineering and administrative controls require oversight in order to be implemented effectively, markets without clear management structures may have difficulty implementing them.

There will be a cost associated with the development of communication materials, markings for where to walk and stand, and possibly paying additional staff to monitor physical distancing.

Limiting the number of people allowed in the market could be difficult to implement and could have negative impacts on households' access to food.

Photo examples of administrative and engineering controls.²



Single direction market





Market with social distancing markers



Line social distancing

Hand Hygiene



Personal controls: General recommendations for hand hygiene in markets

Clean hands frequently. Hand hygiene is a critical way that people can stop the spread of COVID-19. In markets, customers and vendors should clean hands upon entry and exit, before and after each transaction, and after blowing their nose, sneezing, or coughing, in addition to other [key times](#).  [\[37 pages\]](#) 

Types of hand hygiene:

Handwashing with soap and water. Soap and water are available in most contexts and are effective against coronaviruses. The cleanest water available should be used for handwashing, and all types of soap (bar soap, liquid soap, and powder soap) are effective at removing COVID-19. Hands should be scrubbed with soap and water for at least 20 seconds and dried using single-use hand drying materials when available, or air dried.

Soapy water (a mix of water and either powdered or liquid soap) can also be used. To prepare, mix enough soap with water so that you can create a lather when rubbing hands together. When using soapy water, a separate handwashing station of rinse water next to the soapy water station will also be needed. Alternatively, soapy water can be provided in a bottle or other closed container next to a handwashing station of plain water.





Instructions for making soapy water can be found on page 25 of [this document](#)  [\[39 pages\]](#) .

Cleaning with alcohol-based hand rub. If hands are not visibly dirty, hand rub with at least 60% alcohol content can be used against coronaviruses as an alternative to washing hands with soap and water. To use, rub hands together until they feel dry.

If soap and water or alcohol-based hand rub are unavailable or infeasible, handwashing with 0.05% chlorine solution can be considered as a temporary option. The solution should be refreshed daily and made using the below instructions. Users should exercise caution to avoid getting the solution in their eyes or mouth.

[% chlorine in liquid bleach / % chlorine desired] – 1 = Total parts of water for each part bleach

Administrative and engineering controls: Possibilities for markets

- ✓ Ensure widespread access to hand hygiene facilities by placing hand hygiene stations (handwashing stations or alcohol-based hand sanitizer dispensers) at entrances, exits, and throughout the market, including within 5 meters of toilets if any are present at the market. Hand hygiene can be made obligatory upon entry and exit of the market. Hand hygiene stations should be obviously placed so that they are hard to avoid. Vendors and customers should have easy access to handwashing facilities (ideally one per vendor or group of vendors, depending on the layout). Handwashing stations should follow [these](#)  [5 pages]  hand hygiene behavior change principles. More information on different handwashing station designs is available [here](#)  [39 pages] . In particular, handwashing stations should: 1) Allow users to scrub their hands under a stream of running water; 2) Secure provided soap (either a cage, rope, or other device); 3) Have a place to catch used water; 4) Provide single-use hand drying materials whenever possible; 5) Provide a waste bin to collect single-use hand drying materials (when applicable).
- ✓ The installation, supervision, and regular refilling should be the responsibility of local public health authorities but can be delegated to building / market managers.³
- ✓ If using 0.05% chlorine solution, provide those doing the mixing with personal protective equipment (thick gloves, thick aprons, and closed shoes).

Materials, activities, and personnel needed for implementation

- ☐ Handwashing stations or alcohol-based hand sanitizer dispensers.
- ☐ Daily access to water (or alcohol-based hand rub) to refill hand hygiene stations and a consistent supply of soap.
- ☐ Market staff to check on hand hygiene stations regularly and refill when necessary.
- ☐ Market staff to enforce hand hygiene practice upon entry and exit to the market.
- ☐ Signs and/or audio messages within the market prompting customers to practice hand hygiene. Messaging should include information about when to practice hand hygiene as well as how.
- ☐ Personal protective equipment (rubber gloves, thick aprons, and closed shoes) if using 0.05% chlorine solution.
- ☐ Locked location for storing handwashing stations or alcohol-based hand sanitizer dispensers overnight.

Considerations and challenges for implementation

Continuous oversight will be required to ensure that hand hygiene stations are refilled regularly, which may be difficult without clear management structures.

If water supply is not available on site, it will be more challenging and costly to regularly refill handwashing stations.

There will be costs associated with purchasing the handwashing stations or alcohol-based hand sanitizer dispensers, refilling water and soap (or sanitizer), personal protective equipment (if needed) developing and printing communications materials, and possibly paying staff to refill and reinforce use of hand hygiene stations upon entry and exit.

There could be supply chain constraints on soap and alcohol-based hand sanitizer if demand increases as COVID-19 spreads. Single-use hand drying materials (such as paper towels) are often unavailable.

If using 0.05% chlorine solution, those mixing the solution should be adequately protected by wearing rubber gloves, thick aprons, and closed shoes during the mixing process because of potential skin and inhalation hazards. They should also be trained on how to mix chlorine solution.


If no thick gloves are available, any kind of gloves can be used. Those mixing should remove gloves and wash hands immediately after mixing. If no aprons are available, cleaners can wear protective clothing (such as long pants and long-sleeved shirts) and launder after use.

Example of making 0.05% solution with 5% liquid bleach:

$$[5\% \text{ chlorine in liquid bleach} / 0.05\% \text{ chlorine desired}] - 1 = [5 / 0.05] - 1$$

= 99 parts of water for each part liquid bleach

If you are using a 20 L container to mix, you need 200 mL of bleach and should fill the rest of the container with water.

20 L / 100 parts = 0.2 L, or 200 mL Further instructions are available [here](#)  [1 pages]

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Cleaning and Disinfection

Personal controls: General recommendations for cleaning and disinfection in markets

Clean and disinfect frequently touched surfaces at least once a day.⁴ In many market settings, the only surfaces that customers touch include the items that they are purchasing, cash, and any shared utensils, cups, or plates for food and beverages sold in markets). It is also possible that surfaces that are porous and therefore difficult to disinfect, such as wood tables, are touched frequently, but this will be different in every market and will need to be left up to the market administrator to assess. Railings, door handles, shopping carts, and sanitation (restroom/toilet/latrine) surfaces are other examples of frequently touched surfaces.

Cleaning refers to the removal of germs, dirt, and impurities from surfaces. It does not kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.

Disinfecting refers to using chemicals, for example, sodium hypochlorite (bleach), to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

In market settings, use a **0.1% solution** made from bleach, Calcium Hypochlorite (HTH), or bleaching powder for disinfection. Instructions for using HTH powder or bleaching powder can be found [here](#). 📄 [1 page]

To mix a solution using liquid bleach, use the percentage found on the bleach bottle (for example, 5%) and **follow these instructions**:⁵

[% chlorine in liquid bleach / % chlorine desired] – 1 = Total parts of water for each part bleach

Example of making 0.1% solution with 5% liquid bleach:

$[5\% \text{ chlorine in liquid bleach} / 0.1\% \text{ chlorine desired}] - 1 = [5 / 0.1] - 1$
= 49 parts of water for each 1 part liquid bleach (50 parts total)

If you are using a 20 L jerry can to mix:

20 L / 50 parts = 0.4 L or 400 mL liquid bleach (add to empty jerry can). Fill the rest of the jerry can with water.

Administrative and engineering controls: Possibilities for markets

- ✓ Market administrators should designate set 'cleaners' (chosen vendors, cleaners, or other staff) to carry out cleaning and disinfection of high-touch surfaces once a day,

or more frequently if possible. This can take place either before the market opens or after it closes, whichever makes the most sense based on the context.

- ✓ Market administrators and designated cleaners should walk through the market together and decide which surfaces are touched frequently by customers and vendors and therefore should be the target of cleaning and disinfection efforts.
- ✓ Provide the market's designated cleaners with cleaning supplies (soap/detergent, bleach, buckets) and personal protective equipment (PPE) to wear when mixing, cleaning, and disinfecting (rubber gloves, thick aprons, and closed shoes). PPE should be used for COVID-related disinfection only (cleaners should not bring home PPE – it should be stored at the market in a secure, designated area).
- ✓ Provide those who typically clean (vendors, cleaners, or other staff) with information (e.g. written or pictorial instructions) about when and how to clean and disinfect and how to safely prepare disinfectant solutions, as described in the leftmost column.

Materials, activities, and personnel needed for implementation

- ☐ Stocks of soap, bleach, buckets, and other cleaning supplies (e.g. mops, rags).
- ☐ Personal protective equipment for designated cleaners (rubber gloves, thick aprons, and closed shoes).
- ☐ Sufficient access to non-turbid water to meet all cleaning and disinfection needs.
- ☐ Communications materials describing the cleaning and disinfection process, including proper mixing of solutions, for use by designated cleaners.

Considerations and challenges for implementation

There will be costs associated with purchasing the bleach, soap, cleaning supplies, and personal protective equipment; printing communications materials; and possibly having to pay additional staff to clean.

If no thick gloves are available for cleaners, any kind of gloves can be used. If no aprons are available, cleaners can wear protective clothing (such as long pants and long-sleeved shirts) and launder after use.

There could be further supply chain constraints on soap and chlorine products and PPE as demand increases as COVID-19 spreads.

If water supply is not available on site, it will be more challenging and costly to clean and disinfect daily.

There is potential for harm to users when using disinfection products, so it is important for cleaners to be adequately protected in the mixing and disinfection process and trained on how to mix and disinfect.

Note: Large-scale spraying of disinfectant in public places, including markets, is not recommended. There is limited evidence that it is effective. To be effective, disinfectants need to have sufficient contact time and coverage, which is difficult to get when doing

large-scale spraying. There is also limited ability to control spray-related inhalation hazards by nearby people.

Additionally, organic matter, like that which is often found on the ground in public places, would need to be removed by cleaning before disinfectants would work.⁵

Cleaning and disinfection procedures:⁵

1. Put on personal protective equipment (rubber gloves, thick aprons, and closed shoes).
2. Mix 0.1% bleach solution using the procedures described above in well-ventilated area.
3. Clean with detergent or soap and water to remove organic matter.
4. Apply the 0.1% solution to the surface and allow for a contact time (the amount of time that the disinfectant should remain wet and undisturbed on the surface) of 1 minute. Additional disinfectant may need to be applied to ensure it remains wet for 1 minute. If any residue remains after 1 minute, rinse with clean water.
5. **After cleaning and disinfection, remove personal protective equipment and wash hands immediately.**

Respiratory Hygiene

Personal controls: General recommendations for respiratory hygiene in markets

Cover coughs and sneezes and wear a **mask** when in public settings where other physical distancing measures are difficult to maintain, particularly in contexts where there is high community transmission.

Individuals should cover coughs and sneezes with their elbow or a tissue, and dispose of the tissue and clean hands immediately.

In several countries, vendors and customers wear **masks** while at the market.

Administrative and engineering controls: Possibilities for markets

- ✓ Market administrators can make it compulsory for vendors and customers to wear masks while at the market
- ✓ Use of face coverings can be enforced by the market staff member who is making sure customers practice hand hygiene and informing them about physical distancing measures.
- ✓ In closed markets, open doors and windows as much as possible to increase air flow. If available, fans can help increase air flow.



Materials, activities, and personnel needed for implementation



- ❑ Signs and/or audio messages within the market to remind people to wear masks, explain why they are wearing masks (to protect others), and remind them to cover their coughs and sneezes.
- ❑ Communication campaigns (via radio, newspaper, social media, WhatsApp, or other platforms) so that customers and vendors are aware of the new procedures and know to bring masks with them when they go to the market.

Considerations and challenges for implementation



This is a relatively low-cost measure and should be straightforward to implement, especially if masks are encouraged for use in other public settings, but there will still be costs associated with developing and printing communications materials.

Resources

[Guidance on Supporting Safe and Functioning Food Markets](#)  [7 pages]  – Feed the Future / USAID

[Tips for Engaging Communities during COVID-19 in Low-Resource Settings, Remotely and In-Person](#)  [31 pages]  – GOARN / IFRC / UNICEF / WHO

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